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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,684	01/04/2002	Thomas M. Weber	SD-6737	5011

7590 07/13/2004

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EXAMINER	
ROSENBERGER, RICHARD A	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/040,684	WEBER ET AL.
	Examiner	Art Unit
	Richard A Rosenberger	2877

-- Th MAILING DATE of this communication appears on th cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-15 and 17-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24* is/are allowed.

6)☒ Claim(s) *1-3,5,8-15,17 and 23* is/are rejected.

7)☒ Claim(s) *6,7 and 18-22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5, 8-15 and 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hennessy (US 4,270,274) in view of Borsboom (US 4,884,891)and Coleman et al (US 4,622,974).

The Hennessy reference shows inserting a probe tip having a point into a cut of meat, emitting green light (column 2, line 7) from a LED (8; column 2, line 8) in to the cut of meat from the probe tip and monitoring the light returning form the probe tip. The meat reflects the green light less that does the fat, thus the transition will be marked by a decrease in the returning light, thus marking the location of the interface between the fat and lean tissue. The amount of returned light is correlated with the physical location of the probe using a location measuring arrangement (18, 19, 20). The probe is illustrated as having a generally frusto-conical shape.

Borsboom et al shows a probe for insertion into meat (column 5, lines 9-12), using fibers to direct he light to and from the probe. It would have been obvious to use such fibers in this known manner to direct light to and from the probe tip on a system such as shown by Hennessy because, as shown by Borsboom, it is a known

manner of constructing such a probe, and would reduce the size an complexity of the probe itself while allowing for a more convenient placement of and a wider selection of usable light sources and detector arrangements. Borsboom shows a central fiber with surrounding fibers; although Borsboom et al uses the central fiber for illumination, and at least suggests that the light be directed form the front of the tip rather than from the side of the tip as shown by Hennessy. It would have been obvious that the surrounding fibers could be used because those in the art would recognize that the passage of light in either direction would be as effective as the passage of light in the other, there is no reason why light going in one direction would react differently that light passing in the other. Making a plurality of measurements of the fat layer at different points in the cut of meat would have been obvious because it would not be expected that the fat layer would be completely uniform; doing so with a plurality of probes would have been obvious because it would allow a plurality of measurements to be made at the same time and would thus reduce the time needed. Coleman al shows that it is known to use a beamsplitter to direct light to and from optical fibers in a probe structure; see beamsplitter 44 in figure 1 of that reference.

3. The references do not appear to teach such a probe having a frusto-conical point in which the reception aperture is located on the central axis of the probe tip (claim 6) or a probe tip having a conical potion having a tip with the reception

aperture at the central axis of and on the point of the probe tip (claims 18 and 24). Thus claims 6, 7 and 18-22 and 24 contain allowable subject matter. Claim 24 is allowable and claims 6,7 and 18-22 are objected to as being dependent form unallowed parent claims but would be allowable if rewritten in independent form including all of the limitations of their respective parent claims.

4. The remarks filed 19 March 2004 have been considered.

It is of course correct that Hennessy does not teach using optical fibers to direct the light to and from the measurement position of the probe; the rejection is in no way based upon any allegation of belief that it does. The art as a whole does show that such use of fibers with similar probes to measure meat is known and suggests the use of such fibers in the manner claimed in the rejected claims.

The argument relating to the diameter of the probe is noted, but does not appear relevant to the instant claims, which contain no limitations relating to the probe diameter.

Borsboom is cited to show the known us of fibers in an elongated probe to direct light to and from the measuring position. This is does show. Similarly Coleman is cited to show the known use of a beam splitter arrangement, which it does show. Neither is cited as showing all that is claimed, and it is of course correct that there is claimed material they do not, taken individually, show or suggest; the rejection, however, is not over either of these references taken individually.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger
9 July 2004

Richard A. Rosenberger
Primary Examiner